

PROPOSED AMENDMENTS TO CLAIMS

Listing of Claims

1. (Currently Amended) A transmission for a work vehicle having PTO function, comprising:

a first transmission shaft for receiving engine power through a PTO power train;

a second transmission shaft for receiving the engine power through a traveling power train, said second transmission shaft being coupled to a rear differential mechanism;

a third transmission shaft coupled to a rear PTO;

a fourth transmission shaft for receiving force from the second transmission shaft;

a first gear transmission mechanism for transmitting the force from the first transmission shaft to the third transmission shaft;

said first gear transmission mechanism including;

a first input gear mounted on the first transmission shaft,

a first output gear mounted on the third transmission shaft, and

a relay gear ~~loosely~~ mounted on and rotatable with respect to the second transmission shaft for transmitting the force from the first input gear to the first output gear; and

a second gear transmission mechanism for transmitting the force from the second transmission shaft to the fourth transmission shaft;

said second gear transmission mechanism including;

a second input gear mounted on the second transmission shaft,

a second output gear mounted on the fourth transmission shaft, and

a further relay gear ~~loosely~~ mounted on and rotatable with respect to the third transmission shaft for transmitting the force from the second input gear to the second output gear.

2. (Original) The transmission according to claim 1, wherein said fourth transmission shaft comprises a front wheel transmission shaft for transmitting force to front wheels.

3. (Currently Amended) The transmission according to claim 1, further comprising:
a mid PTO shaft; and
a third gear transmission mechanism for transmitting the force from the first gear transmission mechanism to the mid PTO shaft;
said third gear transmission mechanism including;
a third output gear mounted on the mid PTO shaft,
a first relay gear ~~loosely~~ mounted on and rotatable with respect to the third transmission shaft for receiving the force from the first gear transmission mechanism, and
a second relay gear ~~loosely~~ mounted on and rotatable with respect to the fourth transmission shaft and meshing with said first relay gear and said third output gear.

4. (Original) The transmission according to claim 1, wherein said first transmission shaft mounts a PTO clutch.

5. (Original) The transmission according to claim 3, wherein further comprising a mid PTO clutch interposed between the third gear transmission mechanism and the mid PTO shaft.

6. (Previously Presented) The transmission according to claim 3, wherein said first relay gear of the first gear transmission mechanism includes a gear portion meshing with the first input gear of the first gear transmission mechanism, a further gear portion meshing with the first output gear of the first gear transmission mechanism and a still further gear portion meshing with the first relay gear of the third gear transmission mechanism.